

REMARKS/ARGUMENTS

Claims 1, 2, 16-18, 20 and 22 have been amended in a non-limiting manner so that they better conform to U.S. practice.

Claim 13 has been canceled.

New claims 29 and 30 have been added, focusing on a preferred electronically conducting compound, carbon.

New claims 31-33 have been added, requiring the organic or organometallic compound(s) to be complexing,

No new matter has been added through these amendments or new claims. In particular, the new claims are directed to subject matter previously found in pending claims.

Claims 1-12 and 14-33 are pending in this application, although claim 4 has been withdrawn from consideration.

The Office Action rejected the pending claims under 35 U.S.C. § 112, second paragraph, as being indefinite because of the phrase “a short period of time.” In view of the following comments, Applicants respectfully request reconsideration and withdrawal of this rejection.

Initially, Applicants note that the phrase “a short period of time” is defined in the present specification as meaning “generally less than or equal to 1 hour.” (Page 12, lines 30-31). Furthermore, Applicants note that this phrase does not stand alone in the pending claims, meaning that its interpretation does not occur in a vacuum. For example, this phrase is part of a larger phrase within the claims: “are thermally decomposed, in a short period of time, so as to obtain the composite material.” Thus, the interpretation of the phrase in question is linked to thermal decomposition yielding the claimed composite material. Such linkage, together with the temporal definition contained in the specification, provides definite

guidance to one of ordinary skill in the art as to the length of time for which the claimed process is operated. That is, one of ordinary skill in the art would know that operating a process on the order of an hour resulting in thermal decomposition yielding the identified composite material falls within the claims. Stated another way, a process which is operated for 1 hour and 1 minute, or 1 hour and five minutes, etc., but which yields a composite equivalent to a process which is operated for 59 minutes are surely processes operated for a short period of time as contemplated by the present invention. They are all processes running for approximately the same amount of time (a short period of time as defined in the present application) to yield the composite in question. Given the context of the phrase “a short period of time” in the present claims, the metes and bounds of the claimed invention would be clear to one of ordinary skill in the art, particularly given the definition of this phrase contained in the present specification.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

The Office Action also rejected claims 1-3, 5-20, 22, 24 and 26-28 under 35 U.S.C. § 103 as obvious over Hsu. Hsu’s publication date was July 1, 2004. In contrast, the French priority application for the present application was filed more than five months earlier (on January 28, 2004). Applicants hereby perfect priority in the present application by filing a certified English translation of the French priority application. Applicants respectfully submit that since priority has been perfected, the pending rejection based upon Hsu is rendered moot, and the rejection should be withdrawn.

The Office Action also rejected claims 1-3 and 5-28 under 35 U.S.C. § 103 as obvious over Ravet. In view of the following comments, Applicants respectfully request reconsideration and withdrawal of this rejection.

The claimed processes relate to preparing a composite material by thermally decomposing a homogeneous mixed precursor containing all the elements forming the electrode active compound as well as one or more organic and/or organometallic compounds. According to the claimed processes, thermal decomposition can be thought of as occurring “in a single step” given that all materials to be subject to thermal decomposition are present in the mixed precursor. At least some of the benefits associated with the invention processes are set forth in the present application (see, page 14, line 19 to page 17, line 7) and include, for example, improved purity, improved homogeneity, improved rapidity, improved morphology, etc. Ravet neither teaches nor suggests such processes, or any of the benefits associated with the processes.

Rather than subjecting all of the elements to thermal decomposition “in a single step,” Ravet’s methods can be thought of as “two-step” methods.

Ravet corresponds to CA 2,270,771. As discussed in the present application, Ravet (CA 2,270,771) discloses two-step processes in which (1) the active compound is prepared; and (2) after the active compound is prepared, the composite is formed. (See, page 4, lines 13-29 of the present application). More specifically, Ravet discloses first preparing an electrode active material, and then homogeneously depositing a conductive carbonaceous material on the surface of the electrode active material to form a composite material.

Indeed, Ravet’s examples consist solely of such two-step methods, with Ravet first preparing the electrode active material, and then forming the composite. Example 3 discloses forming a composite from LiFePO₄ material previously prepared (“prepared above”). Example 4 discloses forming a composite from LiFePO₄ “already prepared.” Example 5 discloses forming a composite from LiFePO₄ “already synthesized.” Example 6 discloses forming a composite from a “first synthesized” LiFePO₄.

The practical effect of Ravet's preparation methods is that when Ravet's 3 hour thermal decomposition occurs, only the outer carbonaceous portion of the composite is thermally decomposed. That is, the active material on the interior of the electrode is not thermally decomposed during this step (such interior material has to be decomposed during an earlier, time-consuming step prior to forming the composite). Thus, for Ravet's materials to undergo thermal decomposition, they must undergo not only the 3 hour decomposition referred to by the Office Action (which decomposes the outer carbonaceous layer), but also a previous decomposition period for the interior active material. Clearly, the time required for thermal decomposition is much greater for Ravet's methods than in the present invention. Also clearly, Ravet neither teaches nor suggests the claimed "single step" methods.

For all of the above reasons, Applicants respectfully request reconsideration and withdrawal of the § 103 rejection based upon Ravet.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

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